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Developing indicators for preparation of faculty description in a medical university

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Abstract

Considering the important role of faculty members in the fulfilment of university mission and goals, the current study is aimed at identifying indicators to develop faculty description charts in a medical university. In a survey, all the academic managers of Isfahan Medical University (including vice deans in education and research, and department heads) participated as purposeful sample (n=60), during the academic year 2008-2009. A questionnaire was developed based on the structured interview with expert in faculty member affairs which organized 48 proposed indicators of faculty in five areas. Its content and face validity was approved by expert panel. The percentage of responses to each item was calculated. According to the expert idea, items with more than 50% agreement on the necessity were proposed to be included in faculty description (37 indicators in five areas). Areas were: faculty demography (6 indicators), employment status (4 indicators), educational activities (14 indicators), research activities and capabilities (9 indicators), and administrative activities and services (4 indicators). It seems that developing a faculty description including the proposed indicators could meet at least some information needs of academic managers in decision making for faculty affairs.

Keywords: higher education; medical university; human resource planning; indicator

1. Introduction

Higher education is increasingly involved in sustainable development, through its major functions in man power education, knowledge and technology advancement, and community services. To achieve this, universities need to employ and manage numerous resources, including faculty members as the most important one. Considering the critical role of faculty members in higher education, special attention should be paid to faculty selection, development, evaluation and management. A great number of literatures in education are dealing with different aspects of this issue, attempting to build a scientific basis for university management. For example, Nutter (2000) reported a mission-based system for measuring faculty effort and contributions in medical education. The system was designed in order to quantify all faculty members' activities and give a sum up report to the management.

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Regardless of university type and mission, faculty information systems are considered an important infrastructure that may help university management in faculty workforce planning, evaluation, and supervision. Information systems should provide reports on the performance of individual members as well as cumulative statistics of departments and schools Providing timely access to the faculty members' profile helps university management estimate unmet needs, compare different units, and help quickly present the university situation to related stakeholders (Changiz and coworkers, 2004). Also decision making about new faculty employment and promotion may be facilitated.

Among different methods of statistical profile presentations, charts and graphs are very attractive and plausible to most audiences, as many of them have visual style of learning (Grafi and coworkers, 2007). Thus it may be a good idea to design a graphic template for presenting faculty members' profile. The idea is borrowed from "vital horoscope" which is used in public health system in Iran.

Vital horoscope is a statistical chart in 50*70 cm area, showing events of birth, death, and main health indicators (number of pregnant mothers, breastfeeding infants, vaccinations, etc.), in the community under service. It provides exact statistical data from the smallest units of health services(health houses), and helps health system management to not only have quick access to the every small village data, but also build cumulative data sets and estimate health and population indicators at the national level. Vital horoscope must be on wall of health house throughout the year and be updated upon every new change in indicators (Khosravi and coworkers, 2009).

Faculty information systems are increasingly used in Iranian medical universities as well as Islamic Azad University, in order to facilitate management and communication of faculty members with university leadership as well as each other. The current research was aimed at defining the most important indicators which should be inserted in description charts (faculty horoscope), in order to depict university (or school) status. It is expected that the results are used by faculty information systems in generating it as up to date charts automatically.

2. Method:

This is a descriptive study, with two phases of data gathering and analysis, performed in Isfahan University of Medical Sciences during academic year 2008-2009. In the first phase, a purposeful sample of 10 university managers was interviewed. The interview was structured to result in a list of essential data for management decision making in faulty affairs according to interviewees. Then, the raw list was edited and items were classified to prepare a questionnaire to be surveyed. In the second phase, questionnaire was distributed among university managers at the level of its schools (school deans and vice deans in education and research as well as department heads), so that 60 people received questionnaire by census sampling. Participants were briefed about the aim of the study and their freedom to respond questionnaire.

Face and content validity of the questionnaire was approved by expert panel. Questionnaire items were potentially important indicators of faculty status to be included in faculty description charts. Items were classified in five domains including demographics (8 items), employment situation (5 items), educational activities (14 items), service activities (8 items), and research and development activities (13 items). Analysis of data is descriptive and was performed on pre-designed chart (figure of chart in next page). Scale of questionnaire had 4 levels, from absolutely essential to useless, as follows:

1) The presence of this index in horoscope is absolutely necessary (without it, decision making is impossible)
2) The presence of this index in horoscope is necessary (without it, decision making is not exact)
3) It is better to include this index in horoscope (without it, decision making is difficult)
4) It is useless to put this index in horoscope (knowing or unknowing this index has no effect on decision making)

If the sum of frequency of responses to each item (i.e., indicator) as absolutely necessary and necessary was more than 50%, it was considered to be included in faculty description chart.

Response rate to questionnaire was 100%. The indicators confirmed to be included in faculty description chart (horoscope) are summarized in table 1.

Table1. Indicators with more than 50% agreement to be included in faculty description chart.

Domain	Indicators
Demographics	1- Number of active faculty members (in department/school/university) 2, 3, 4- Number of faculty members on vocational , sabbatical , or assignment leave 5- Distribution of faculty members in different academic ranks(from instructor to professor) 6- Distribution of faculty based on working years (5, 5 to 15, 15 to 25, more than 25 years) 7- Age distribution of faculty: less than 39, 39 to 59, 60 to 65, and more than 66
Employment status	Numbers of: 1- one-year contract faculty 2- extendable contract faculty 3- tenure faulty 4- invited fee for service faculty
Educational activities	1, 2, 3, 4, 5- Numbers of hours spent for teaching theory courses, practical, clerkship and internship units, continuing education courses 6, 7, 8, 9- Numbers of Master students, PhD students, residents, and fellow (subspecialty learners) 10, 11, 12, 13, 14- Average number of dissertations in BS, MS, MD, PhD, and Specialty levels
Administrative activities and services	1- Number of hours allocated for consultation to community clients 2- Number of hours allocated for specialty consultations 3- Number of hours allocated for administrative work in department/school/university 4- number of executive work hours by faculty per year
Research activities and capabilities	1- Distribution of faculty based on their highest academic degree 2, 3- Number of paper publications in national and international journals in the last 5 years 4- number of books published by faculty during the last 5 years 5- Number of innovations/patents by faculty during the last 5 years 6, 7, 8- Number of faculty participated in national and international conferences and workshops during the last 5 years 9- Number of faculty participated in other self-development activities during the last 5 years

4. Conclusion

Although many universities may use faculty description charts in their routine administration, there are limited number of reports about the process of compiling and consensus building on the indicators for routine monitoring. The literature mainly deals with these indicators when the focus is on evaluation purposes (university ranking systems, accreditation, etc.,). The method briefly explained in this work may be reproduced easily in any university for prioritizing indicators to be included in statistical reports and charts. The issue of monitoring indicators may become more important as the structure and mission of universities gets more complex. As an example, medical universities in Iran have heath service responsibility for their province besides to their academic duties in education and research. This brings a lot of executive work to departments and faculty. Consequently, university management is inevitably demanded to overcome role stress in faculty members (Ahmady and coworkers, 2007), and prepare a good plan for faculty development (Ahmady and coworkers, 2009). To respond they require timely and easily understandable data on faculty status and their workload. The framework provided here may help planning and

work as metrics (Nutter 2000). These quantifying systems also need to prepare meaningful reports for management at the level of department, school and university, to support their decision making tasks. We strongly suggest metric systems to think about these reports and plan to have so called "university/ school/ department/ at a glance charts". Of course, practical importance and application of these charts should be tested in future researched and their implication in monitoring of interventions made by university leadership should be investigated more.

One hundred percent response rate to the questionnaire in the present study may reflect the enthusiasm of managers in partnership for advancement of faculty information system, which is used for 10 years in Isfahan Medical University, and it may also reflect their demand for meaningful and timely statistics to be used for monitoring of their system. These both may be also found in other institutions if it is looked for.

Researchers believe that the present work has limitations in terms of sample and context that limits its findings to be generalized, but the main idea and method of work may have something new for other universities.

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